

Please amend the claims as follows:

1. (Currently Amended) A method of characterizing surface structures which comprises
- (I) using a chemically curable impression material to take an impression of at least one site
 - (I 1) of the undamaged surface of an article, and one of
 - (I 2) of a surface of an article damaged by at least one of mechanical exposure, and/or chemical exposure, and/or by exposure to radiation and/or exposure to heat, and/or
 - (I 3) of a surface of a test specimen mounted on the surface of an article, said test specimen surface being damaged by at least one of mechanical exposure, and/or chemical exposure, and/or by exposure to radiation and/or exposure to heat,
 - (II) curing the impression material to produce a negative of the damage pattern, and
 - (III) using image analysis to determine at least one of the extent (%) of the surface structures and/or the extent (%) of the surface damage within the damage pattern on the basis of light-microscope pictures of the negative.

2. (Original) The method as claimed in claim 1, wherein a positive is produced from the negative.
3. (Currently Amended) The method as claimed in claim 2, wherein at least one of the extent (%) of the surface structures and/or the extent (%) of the surface damage in the damage pattern is determined by image analysis on the basis of light-microscope pictures of the positive.
4. (Original) The method as claimed in claim 2, wherein the surface structures or the damage pattern are or is characterized additionally on the basis of the positive by means of AFM (atomic force microscopy) and SEM (scanning electron microscopy).
5. (Currently Amended) ~~The method as claimed in any of claims 1 to 4,~~ wherein a composition containing olefinically unsaturated double bonds is used as chemically curable impression material.
6. (Original) The method as claimed in claim 5, wherein a composition based on silicone is used.
7. (Currently Amended) ~~The method as claimed in any of claims 1 to 6,~~ wherein the chemically curable impression material is pressed onto the surface of the article or test specimen in the form of a disk, using a metal die, is cured beneath the metal die, the metal die is removed from the cured disk of impression material, and the cured disk of impression material (negative) is removed from the automobile body or the test panel.

8. (Currently Amended) The method ~~as claimed in any~~ of claims 2 ~~to 7~~, wherein a positive is produced from the negative by contacting the negative with a liquid polymer material and then solidifying the liquid polymer material in contact with the negative and removing the resultant positive from the negative.

9. (Currently Amended) The method as claimed ~~in any~~ of claims 1 ~~to 3 and 5 to 8~~, wherein the negative and the positive are sputter-coated with a precious metal for the light-microscope pictures.

10. (Currently Amended) The method ~~as claimed in any~~ of claims 1 ~~to 3 and 5 to 9~~, wherein a high-resolution digital camera is fitted to a light microscope for the light-microscope pictures.

11. (Currently Amended) The method ~~as claimed in~~ of claim 10, wherein an objective magnification of from 5:1 to 100:1 is used.

12. (Currently Amended) The method ~~as claimed in any~~ of claims 1 ~~to 3 and 5 to 11~~, wherein microscope pictures of at least two measurement fields are taken.

13. (Currently Amended) The method ~~as claimed in any~~ of claims 1 ~~to 3 and 5 to 12~~, wherein the measurement field is from $200 \times 100 \mu\text{m}^2$ to $1\,500 \times 1\,000 \mu\text{m}^2$.

14. (Currently Amended) The method as ~~claimed in any of claims 1 to 3 and 5 to 13~~, wherein imaging, image analysis, and image archiving are carried out using an image processing program.

15. (Currently Amended) The method as ~~claimed in any of claims 1 to 3 and 5 to 14~~, wherein ~~for imaging~~ color microscope pictures are taken for imaging.

16. (Currently Amended) The method as ~~claimed in any of claims 1 to 3 and 5 to 15~~, wherein the image analysis ~~embraces~~ comprises the following steps:

- (1) production of the original image and shading correction,
- (2) production of a green separation,
- (3) setting of threshold values, production of a binary image, and image filtering,
- (4) particle separation and, if desired, erosion and dilation,
- (5) detection and classification,
- (6) transfer to an Excel table,
- (~~87~~) production of statistics from 5 to 20 measurement fields, and
- (~~98~~) evaluation.

17. (Currently Amended) The method as ~~claimed in of~~ claim 16, wherein for detection (5) of the surface structures or surface damage in the binary image (3) the following shape parameter are defined:

- (a) area of a particle (surface structure or surface damage) = (number of pixels) x (calibration factors in X and Y direction),
- (b) aspect ratio = maximum height/width ratio of an enclosing rectangle of the particle, and
- (c) shape factor = $4\pi a/U^2$, where a = area and U = periphery.

18. (Currently Amended) The method ~~as claimed in~~ of claim 16 ~~or 17~~, wherein the surface structures or surface damage are or is classified according to area or according to width.

19. (Currently Amended) The method ~~as claimed in~~ of claim 18, wherein classification according to area takes place into at least 10 area classes and classification according to width takes place into one of at least 5 Feret-min width classes, Feret-min being defined as the minimum distance between parallel tangents to opposite particle edges, or into at least 5 classes of mean width, the mean width being defined as the ratio of area to Feret-max (length of the particle).

20. (Currently Amended) The method ~~as claimed in~~ of claim 18 ~~or 19~~, wherein in the case of classification according to area the surface structure extent or surface damage extent (%) of each area class is determined and also the total surface structure extent or total surface damage extent (%) of all area classes, and in the case of classification according to width, the surface structure extent or

surface damage extent (%) of each width class and also the total surface structure extent or surface damage extent (%) of all width classes is determined.

21. (Canceled)